



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report



For the week ending March 21, 2015 - Week 11

All data presented in this report are provisional and may change as additional reports are received

Quick Stats

Percent of outpatient visits for ILI ¹	1.6% (baseline 1.7%)
Percent of influenza rapid test positive	18.9% (325/1721)
Percent of RSV rapid tests positive	33.0% (132/400)
Percent school absence due to illness ²	2.27%
Number of schools with ≥10% absence due to illness	3
Influenza-associated hospitalizations ³	31/5,993 inpatients surveyed
Influenza-associated pediatric mortality (Cumulative)	3

¹ ILI: Influenza-like illness is defined as a fever of ≥100° F as well as cough and/or sore throat.

² Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools

³ Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals

Iowa Influenza Geographic Spread²

No Activity
Sporadic
Local
Regional
Widespread

²This is based on CDC's activity estimates definition

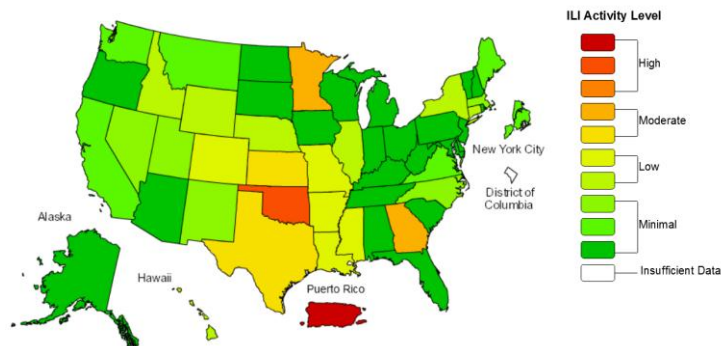
www.cdc.gov/flu/weekly/overview.htm

Iowa statewide activity summary:

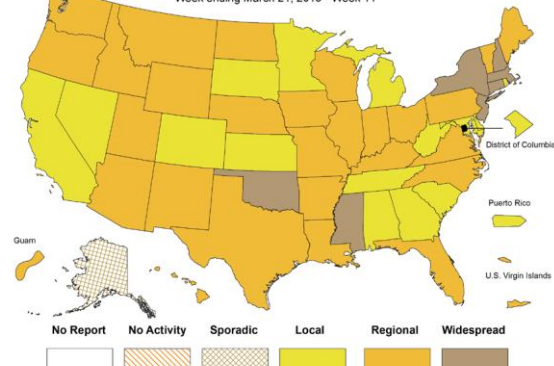
The geographic spread of influenza in Iowa remains regional. For this reporting week, the State Hygienic Laboratory detected one flu A(H3N2), one flu B(Victoria lineage), and 15 flu B(Yamagata lineage) cases. Three schools reported 10 percent or greater absenteeism and 31 influenza-associated hospitalizations were reported from sentinel hospitals. There have been 60 reported influenza outbreaks in Iowa long-term care facilities this influenza season and IDPH has confirmed three influenza-related deaths in children (age 0-17).

National activity summary - (CDC):

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2014-15 Influenza Season Week 11 ending Mar 21, 2015



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending March 21, 2015 - Week 11



Synopsis: During week 11 (March 15-21, 2015), influenza activity continued to decrease, but remained elevated in the United States.

Viral Surveillance: Of 12,824 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 11, 1,358 (10.6 percent) were positive for influenza.

Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold.

Influenza-associated Pediatric Deaths: Nine influenza-associated pediatric deaths were reported.

Influenza-associated Hospitalizations: A cumulative rate for the season of 58.4 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.

Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 2.2 percent, above the national baseline of 2.0 percent. Six regions reported ILI at or above region-specific baseline levels. Puerto Rico and one state experienced high ILI activity; four states experienced moderate ILI activity; 12 states experienced low ILI activity; New York City and 33 states experienced minimal ILI activity; and the District of Columbia had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in seven states was reported as widespread; Guam, the U.S. Virgin Islands, and 27 states reported regional activity; the District of Columbia, Puerto Rico, and 15 states reported local activity; and one state reported sporadic activity.

Detailed information can be found online at www.cdc.gov/flu/weekly/

International activity summary - (WHO):

Globally, influenza activity remained elevated in the northern hemisphere with influenza A(H3N2) viruses predominating, although some countries in Asia, Europe and North Africa reported high levels of activity associated with influenza A(H1N1)pdm09 viruses. Detailed information can be found online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/.

Laboratory surveillance program:

The State Hygienic Laboratory (SHL) is the primary lab for influenza testing and reporting in Iowa. SHL reports the number of tests performed and the type and strain of positive tests to the influenza surveillance network several times every week. In addition, SHL surveys clinical and reference labs for the number of rapid-antigen tests performed and number positive weekly. This report also includes the positive non-influenza virus tests reported from SHL, the Dunes Medical Laboratories at Mercy Medical Center in Sioux City, and Iowa Methodist Medical Center in Des Moines.

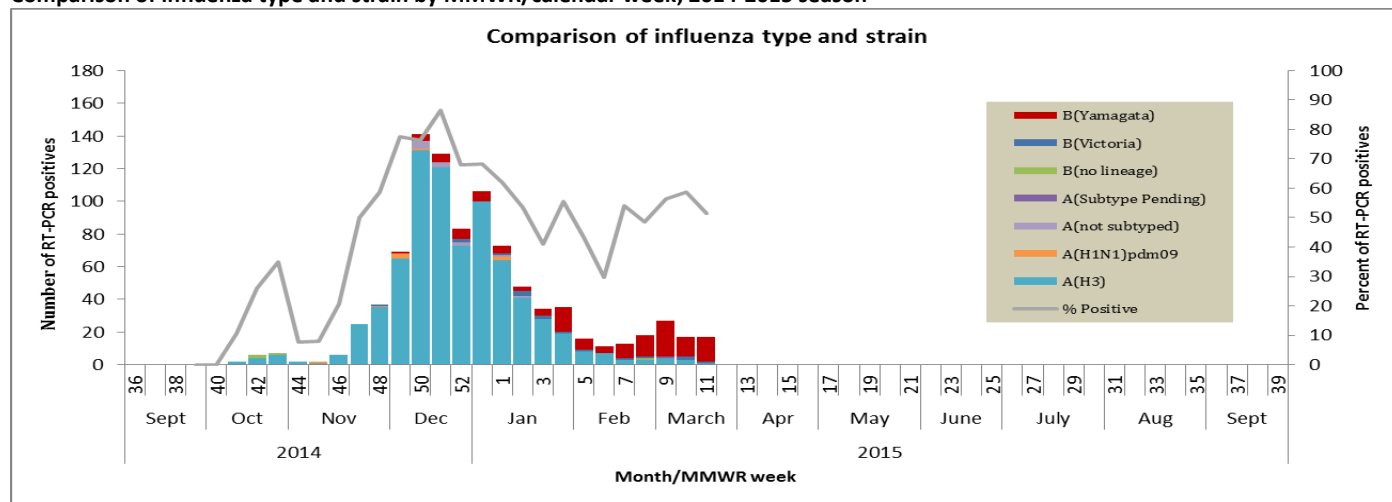
Age Group	CURRENT WEEK				YEAR TO DATE (9/1/14 – PRESENT WEEK)			
	Flu A				Flu A			
	A(H1N1)pdm09	A(H3)	Subtype Pending	Not subtyped	A(H1N1)pdm09	A(H3)	Subtype Pending	Not subtyped
0-4	0(0%)	0(0%)	0(0%)	0(0%)	3(38%)	64(9%)	0(0%)	1(9%)
5-17	0(0%)	0(0%)	0(0%)	0(0%)	1(13%)	122(17%)	0(0%)	2(18%)
18-24	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	61(8%)	0(0%)	1(9%)
25-49	0(0%)	0(0%)	0(0%)	0(0%)	2(25%)	83(12%)	0(0%)	1(9%)
50-64	0(0%)	0(0%)	0(0%)	0(0%)	1(12%)	63(9%)	0(0%)	3(27%)
>64	0(0%)	1(100%)	0(0%)	0(0%)	1(12%)	327(45%)	0(0%)	3(27%)
Total	0	1	0	0	8	720	0	11

*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included
*Not subtyped" column is due to weak detections. This can be due to poor collection, timing of collection or stage of infection.

Age Group	CURRENT WEEK			YEAR TO DATE (9/1/14 – PRESENT WEEK)		
	Flu B			Flu B		
	Victoria Lineage	Yamagata Lineage	Lineage Pending	Victoria Lineage	Yamagata Lineage	Lineage Pending
0-4	1(100%)	1(7%)	0(0%)	4(27%)	13(10%)	0(0%)
5-17	0(0%)	2(13%)	0(0%)	3(20%)	37(29%)	0(0%)
18-24	0(0%)	0(0%)	0(0%)	2(13%)	5(4%)	0(0%)
25-49	0(0%)	1(7%)	0(0%)	2(13%)	26(20%)	0(0%)
50-64	0(0%)	3(20%)	0(0%)	2(13%)	21(16%)	0(0%)
>64	0(0%)	8(53%)	0(0%)	2(13%)	26(20%)	0(0%)
Total	1	15	0	15	128	0

*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included

Comparison of influenza type and strain by MMWR/calendar week, 2014-2015 season



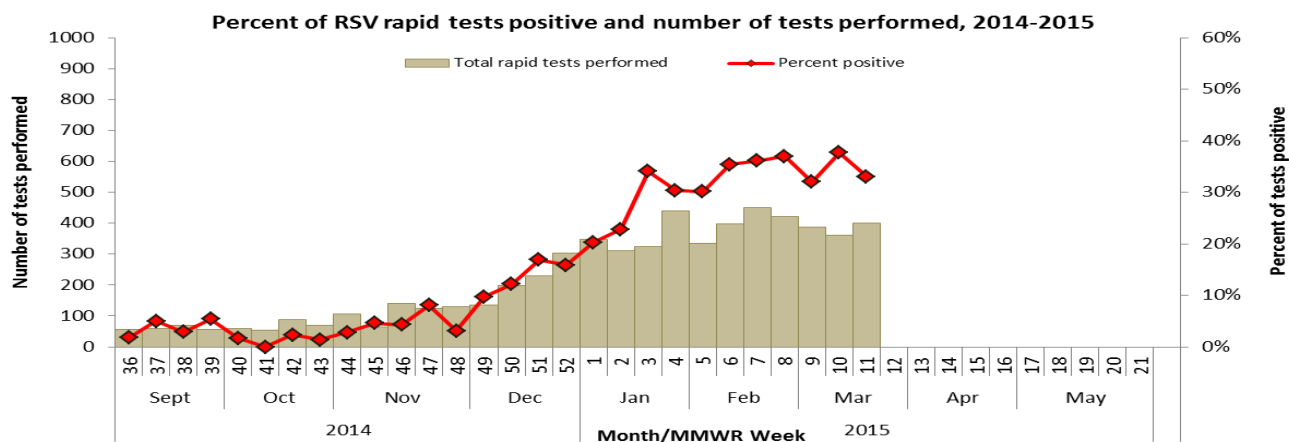
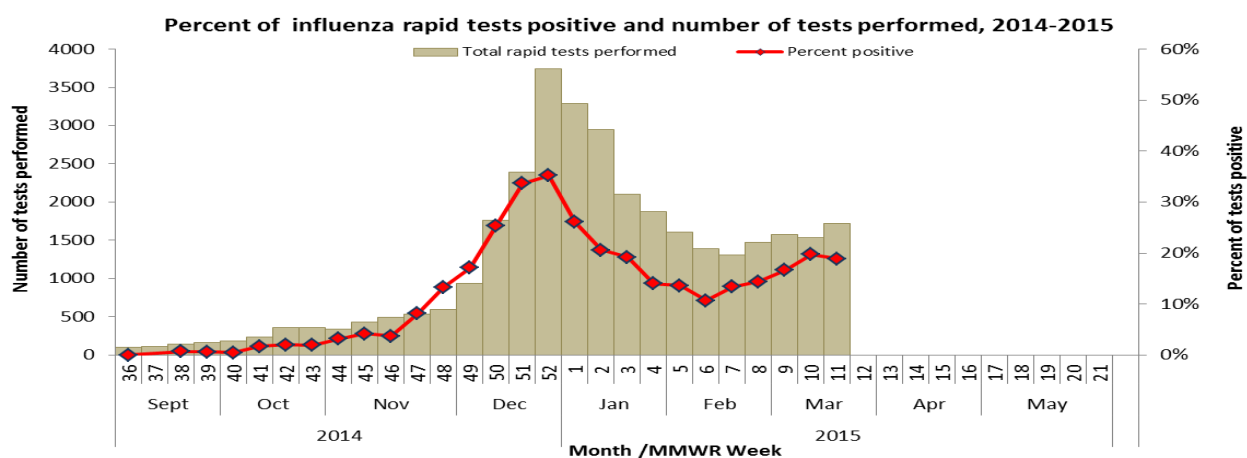
Rapid influenza and RSV test surveillance:

The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of influenza and respiratory syncytial virus (RSV) rapid tests performed and the number of tests positive. This table includes only the number of patients tested for influenza or RSV at laboratory surveillance sites throughout the state. This table does not provide case counts.

Table 2: Percent of influenza rapid tests positive and number of tests performed by region for the present week

REGION*	RAPID ANTIGEN INFLUENZA TESTS					RAPID ANTIGEN RSV TESTS		
	Tested	Flu A	Flu B	Undefined	% Positive	Tested	Positive	% Positive
Region 1	170	2	19	0	12.4	77	29	37.7
Region 2	69	0	15	0	21.7	13	1	7.7
Region 3	236	3	28	0	13.1	49	11	22.4
Region 4	191	6	49	0	28.8	25	6	24.0
Region 5	175	3	23	0	14.9	39	17	43.6
Region 6	880	11	164	2	20.1	197	68	34.5
Total	1721	25	298	2	18.9	400	132	33.0

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.



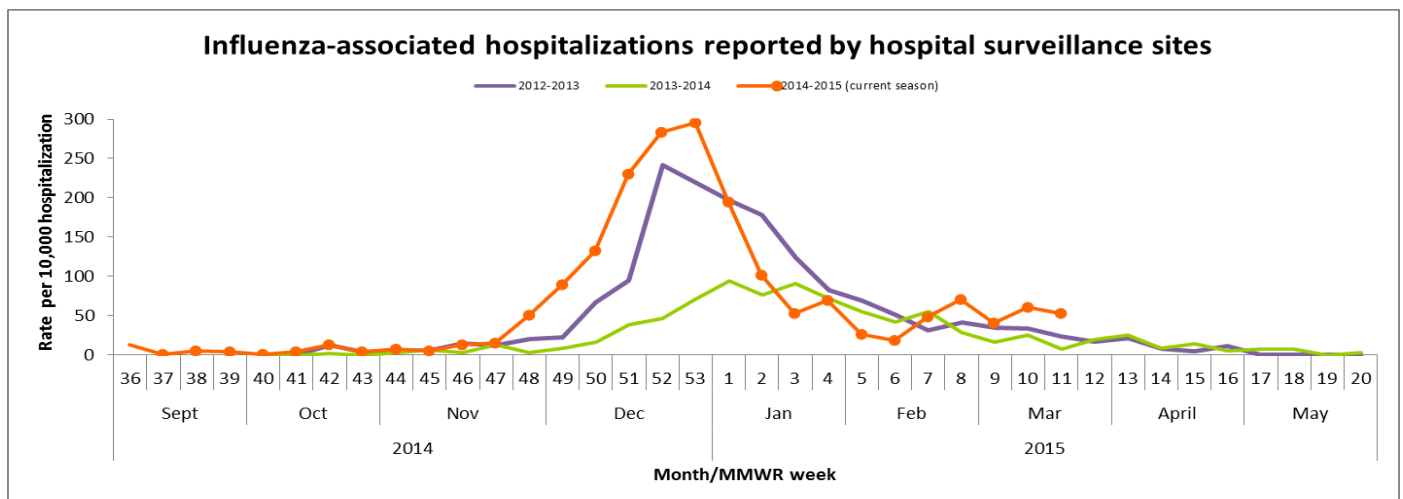
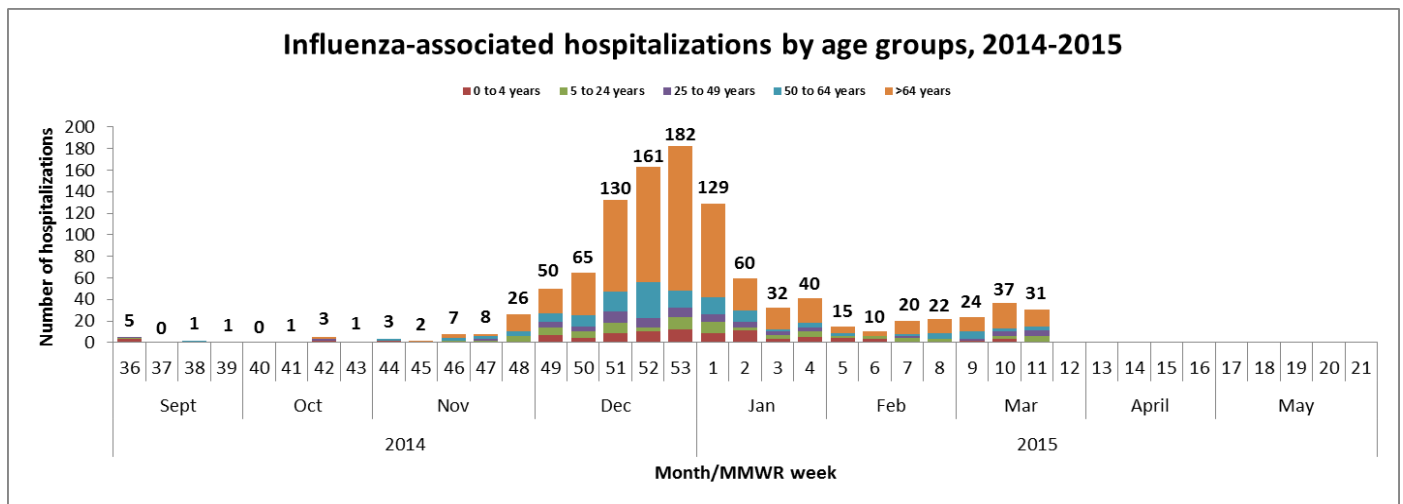
Non-influenza respiratory virus:

Viruses	CURRENT WEEK	CUMULATIVE (9/1/14 – PRESENT WEEK)
Adenovirus	13	225
Parainfluenza Virus Type 1	0	2
Parainfluenza Virus Type 2	0	100
Parainfluenza Virus Type 3	6	77
Parainfluenza Virus Type 4	0	19
Rhinovirus/Enterovirus	19	771
Respiratory syncytial virus (RSV)	44	390
Human metapneumovirus (hMPV)	18	119
Total	100	1703

Influenza-associated hospitalizations:

Sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.

AGE	CURRENT WEEK	CUMULATIVE (9/1/14 – PRESENT WEEK)
Age 0-4	1	95
Age 5-24	5	87
Age 25-49	5	73
Age 50-64	4	156
Age >64	16	665
Total	31	1076

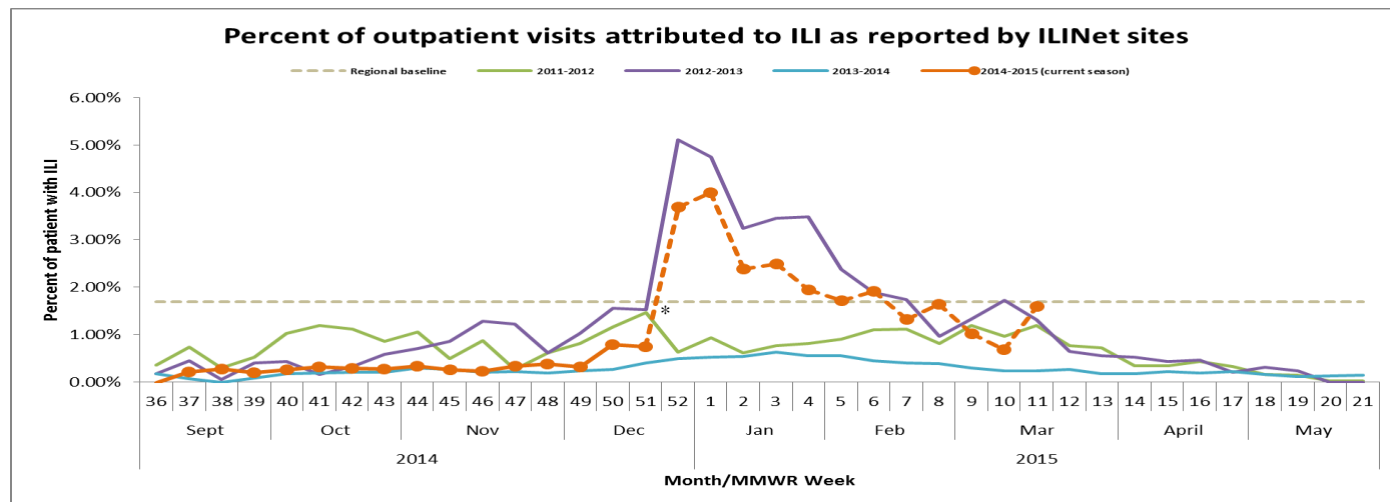


Outpatient health care provider surveillance program (ILINet):

Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week. This system is a key part of Iowa's influenza surveillance. Iowa health care providers interested in joining this surveillance program should contact Kemi Oni at 515-725-2136 or oluwakemi.oni@idph.iowa.gov for more information.

Table 6: Outpatient visits for influenza-like illness (ILI) – past 3 weeks

Hospitalization	%ILI	Total ILI	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age >64
Week 9, ending Mar 7	1.0	19	3	8	3	2	3
Week 10, ending Mar 14	0.7	13	3	3	3	1	3
Week 11, ending Mar 21	1.6	14	3	1	5	4	1



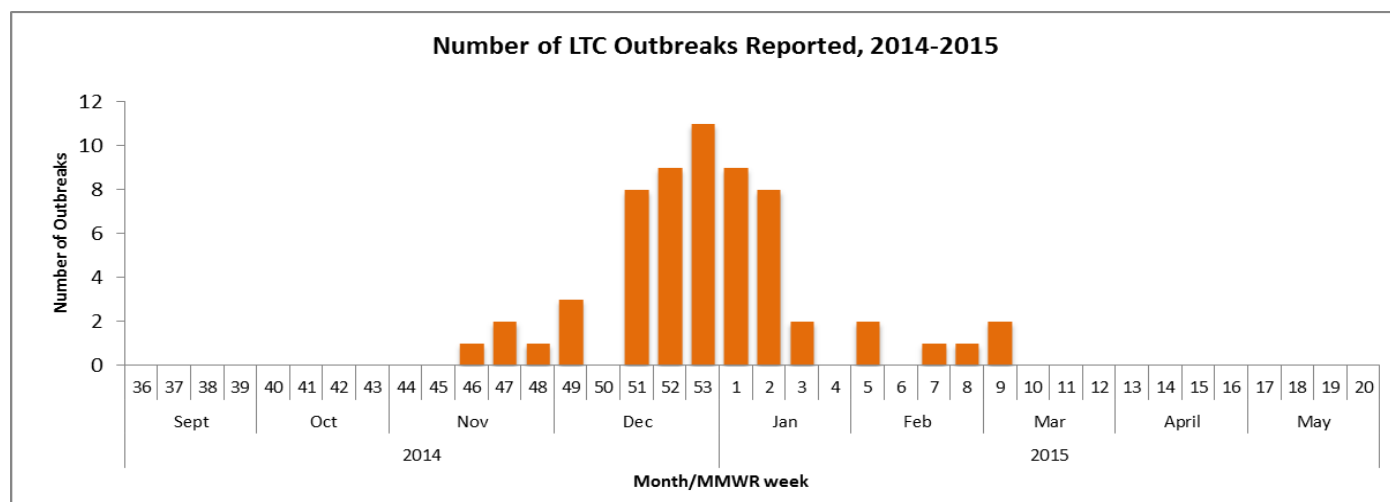
*Database used to calculate this percentage has been modified to more accurately reflect what is occurring in acute care outpatient clinics in Iowa.

Long-term Care Outbreaks

Table 7: Number of long-term care outbreaks investigated

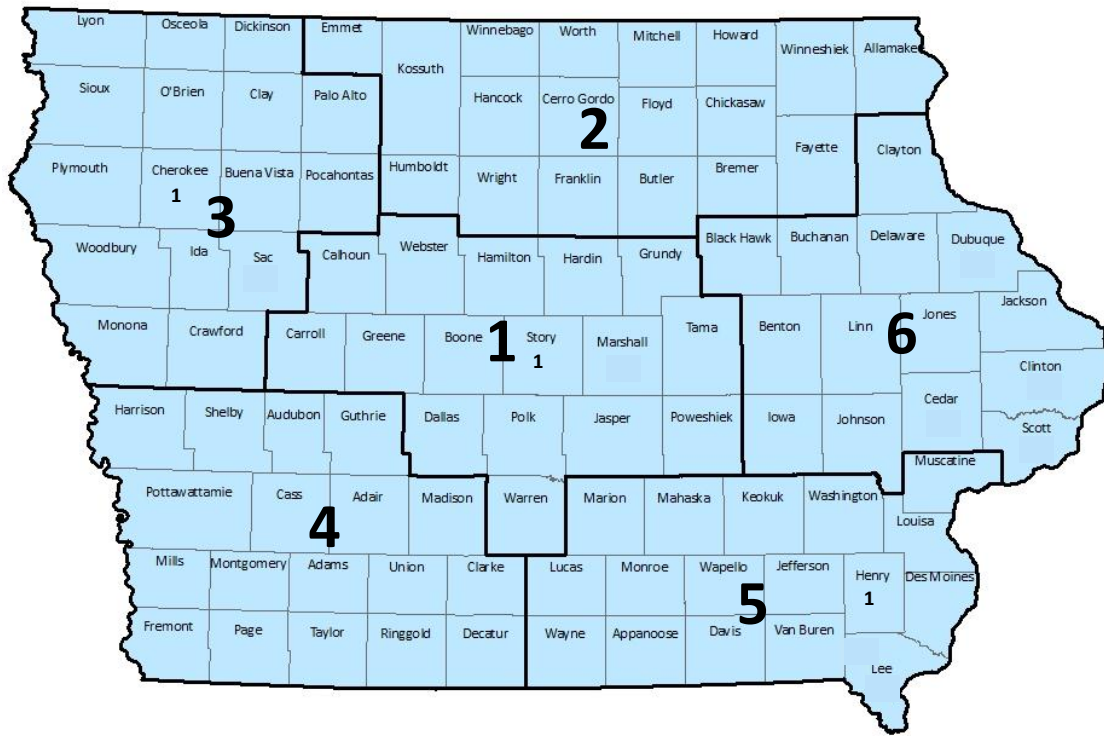
REGION*	CURRENT WEEK	CUMULATIVE (9/1/14 – PRESENT WEEK)
Region 1 (Central)	0	15
Region 2 (NE)	0	12
Region 3 (NW)	0	10
Region 4 (SW)	0	10
Region 5 (SE)	0	4
Region 6 (Eastern)	0	9
Total	0	60

*Region 1: Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2: Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3: Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4: Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5: Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6: Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.



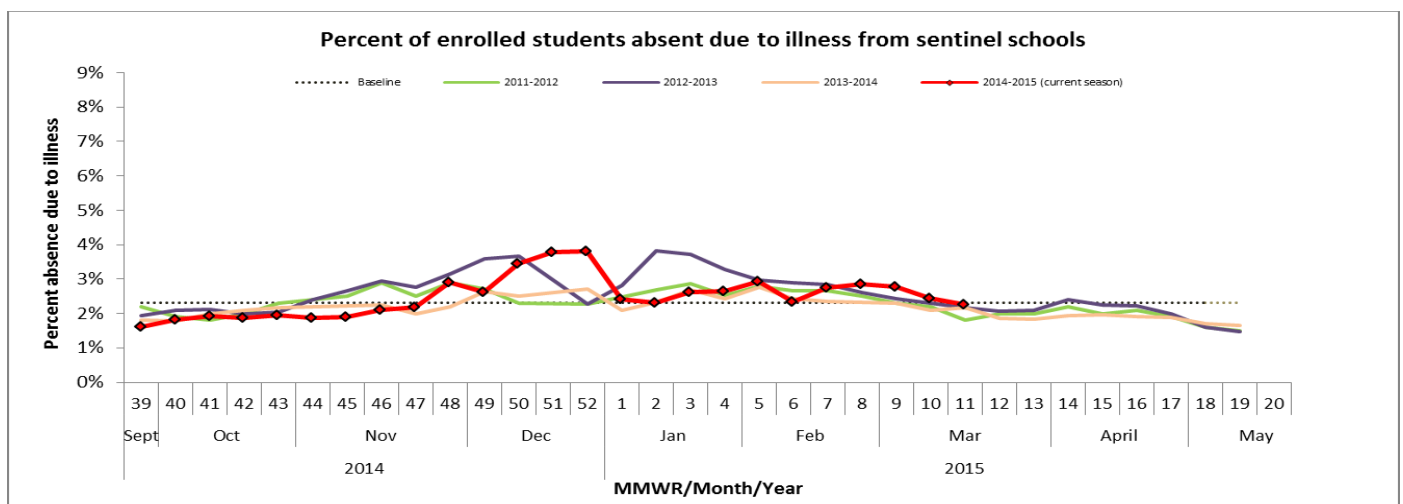
10 percent school absenteeism:

Schools (k-12) track and report outbreaks of influenza-like illness when the number of students absent with illness reaches or exceeds 10 percent of total student enrollment. Regional map with schools that have $\geq 10\%$ absence due to illness for this current reporting week is displayed below.



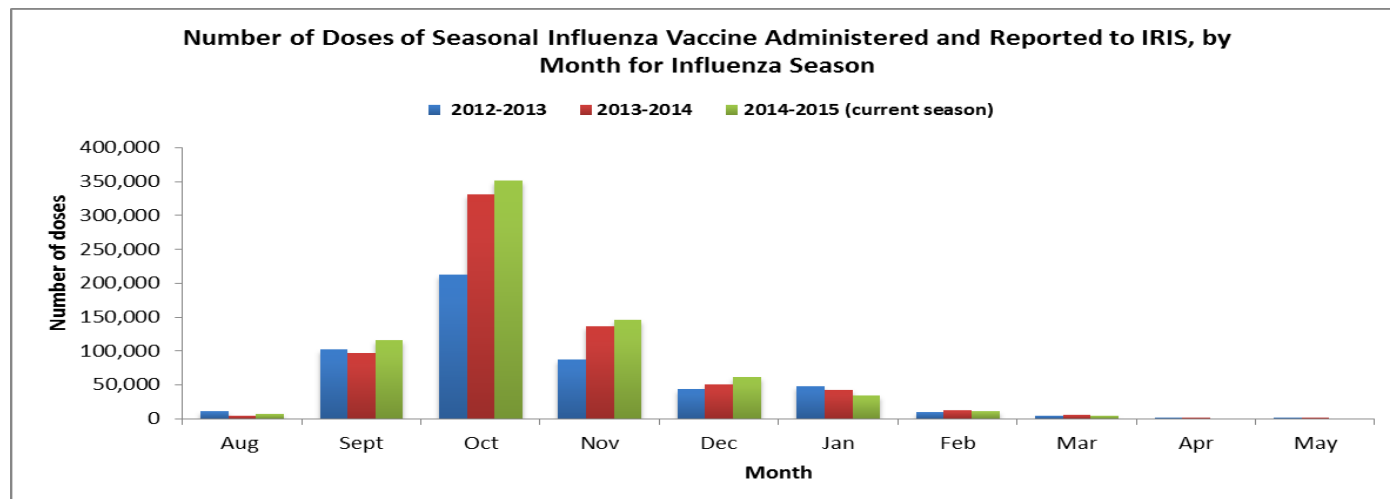
School surveillance program:

Sentinel schools that participate in IISN voluntarily track and report absence due to all illness (including non-influenza illnesses) and the total enrollment each week.



Seasonal influenza vaccination:

Seasonal influenza vaccination data in Iowa is based on doses reported to the Iowa Immunization Registry Information System (IRIS). IRIS is a confidential, computerized, population-based system that tracks immunization for children, adolescents and adults who are seen in a variety of public and private healthcare provider sites throughout the state of Iowa. For more information on the immunization data, contact Kim Tichy, IRIS coordinator at 515-281-4288 or kimberly.tichy@idph.iowa.gov



Note: The data for the 2014-2015 season is only up to the current week and there is a lag between the vaccine administration date and the date reported to the IRIS. The current season's data will be adjusted as additional data is received.

Other resources:

Vaccine:

Influenza vaccine recommendation: <http://www.idph.state.ia.us/ImmTB/Immunization.aspx?prog=Imm&pg=Flu>

CDC vaccine information: <http://www.cdc.gov/flu/faq/flu-vaccine-types.htm>

Vaccine finder: <http://vaccinefinder.org/>

Neighboring states' influenza information:

Illinois: <http://www.idph.state.il.us/flu/surveillance.htm>

Minnesota: <http://www.health.state.mn.us/divs/idepc/diseases/flu/stats/index.html>

Missouri: <http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

South Dakota: <http://doh.sd.gov/diseases/infectious/flu/>

Wisconsin: www.dhs.wisconsin.gov/communicable/influenza/surveillance.htm

Google Flu Trends: <http://www.google.org/flutrends/us/#US-IA>